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(54) Title: METHOD FOR SULFUR COMPOUNDS REMOVAL FROM CONTAMINATED GAS AND LIQUID STREAMS

(57) Abstract: Abstract Described is a desorption process and a process for producing a catalytically deactivated formed zeolitic adsorbent, whereby both processes are suitable to improve the lifetime of a formed zeolithic adsorbent in the removal of sulfur compounds from sulfur contaminated gas and liquid feed streams. The adsorbent is in particular a synthetic 13X or LSX faujasite with a silica to alumina ratio from 1.9 : 1.0 to about 3.0 : 1.0. The cations of the faujasite include alkali and alkaline earth metals. The formed zeolite mixture is preferably catalytically deactivated due to a phosphate treatment. The desorption is carried out thermally, wherein the heat treatment is done at different temperature stages to avoid decomposition of the organic sulfur compounds.